

## SPATIAL ANALYSIS OF KLASSEN TYPOLOGY OF BANJARBAKULA METROPOLITAN URBAN AREA: REGIONAL AND SECTORAL APPROACHES

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### Abstract

This study analyzes the inequality of economic development in the Banjarkakula Metropolitan Urban Area, emphasizing the spatial and sectoral distribution of growth. The objective of the study is to classify regencies and cities, as well as economic sectors, according to the Klassen Typology and to map core-periphery patterns as a basis for formulating more integrated and inclusive metropolitan development policies. The study uses a quantitative descriptive approach using secondary data from the 2020-2024 GRDP (Gross Domestic Product) and population for five regencies and cities in Banjarkakula, as well as the average for South Kalimantan Province. These data are analyzed through growth calculations and GRDP per capita, regional and sectoral Klassen Typology classifications, and then visualized in a Geographic Information System. The results indicate Banjarmasin City as a developed and fast-growing region, Banjarbaru City as an area with potential for rapid development, while Banjar, Barito Kuala, and Tanah Laut Regencies are relatively lagging behind. Sectorally, the central Banjarmasin-Banjarbaru corridor is dominated by advanced service and trade sectors, while the peripheral areas still rely on low-productivity primary sectors, requiring more targeted policy intervention.

**Keywords:** Class Typology, Banjarkakula Area, Region, Sectoral

### INTRODUCTION

Regional development is inherently never evenly distributed. Economic growth tends to be concentrated in certain areas, while other regions lag behind due to limited access to markets, infrastructure, and production networks. Regional development theory explains that high growth in centers of economic activity can have a spillover

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effect to surrounding areas, but also risks increasing inequality if not accompanied by adequate equity policies (Todaro & Smith, 2011).

Global economic developments demonstrate a tendency toward increasing concentration of activity in large-scale urban areas that serve as growth centers. From an economic perspective, metropolitan areas are understood as growth poles where capital, skilled labor, infrastructure, and information networks are concentrated, thus driving innovation and productivity in surrounding areas (Perroux, 1955; Tarigan, 2012). In Indonesia, the regional development policy direction in the 2020-2024 National Medium-Term Development Plan (RPJMN) positions large cities and metropolitan areas as key growth centers, with an emphasis on the development of new metropolitan areas outside Java as growth drivers to reduce the concentration of economic activity in certain areas and promote equitable development between regions (Ministry of National Development Planning/Bappenas, 2020).

The Banjarkakula Metropolitan Urban Area, encompassing Banjarmasin City, Banjarbaru City, Banjar Regency, Barito Kuala Regency, and Tanah Laut Regency, has been designated a National Strategic Area (KSN) and tasked with serving as a new growth hub in South Kalimantan Province. This designation is reflected in various spatial planning regulations that position the Banjarkakula Metropolitan Urban Area as a hub for international-scale economic activity, particularly in the trade and services, tourism, industry, logistics services, and the development of inter-regional connected service centers based on sustainable development. This strategic role requires synergy in development between districts/cities, including infrastructure, economic structure, and spatial planning, so that the benefits of growth can be felt equally across the region (Presidential Decree No. 85, 2024).

The dynamics of development in the Banjarkakula Metropolitan Urban Area demonstrate that the rate of economic growth and contribution are not always evenly distributed across districts/cities within the region. Core areas tend to have higher levels of economic activity and infrastructure density, while some buffer zones face limitations in access, sector diversification, and the quality of supporting infrastructure. This situation creates regional disparities, ultimately impacting the welfare and quality of basic services between districts/cities within the region.

Economic growth data from 2020 to 2024 shows that the average growth rate of the Banjarkakula Metropolitan Urban Area (3.50%) is slightly higher than that of South Kalimantan Province (3.33%). Banjarbaru City (4.59%) and Banjarmasin City (3.69%) had higher average economic growth rates than other regencies/cities, while several regions, such as Tanah Laut Regency (3.29%), Banjar Regency (2.97%), and Barito Kuala Regency (2.96%), showed slower growth. This difference in average economic growth rates reflects the inequality in development between regencies/cities within the region (BPS South Kalimantan Province and Regencies/Cities in the Banjarbaru Metropolitan Urban Area, 2025).

Various studies in Indonesia show similar patterns in other metropolitan areas. Research on the SARBAGITA Region found that the core cities of Denpasar and Badung grew much faster and were wealthier than Gianyar and Tabanan. The spillover effect of growth from the core to other regions has not been optimal, resulting in increasing inequality over time (Purwanti & Setyari, 2021). Another study of the Kedungsepur area found high inequality in the core city and underdevelopment in several buffer districts, despite rapid growth in the construction and services sectors at the regional level (Zuswanto et al., 2014). A study of Kalimantan Island showed similar dynamics, with certain centers dominating growth and creating disparities between regions within the island (Wahyuningsih et al., 2020).

Within this framework, the primary question for the Banjarkakula Metropolitan Urban Area is no longer simply whether the region is growing, but how that growth pattern is distributed spatially and sectorally. Growth can be high in aggregate figures, but the region's internal structure remains unequal. The Klassen Typology offers a tool for addressing this issue by combining the dimensions of growth and per capita income. This method allows for grouping regions/sectors into four categories: developed and rapidly growing (quadrant 1), potential and rapidly developing (quadrant 2), developed but underdeveloped (quadrant 3), and relatively underdeveloped (quadrant 4) (Sjafrizal, 1997; Widodo, 2006; Sukirno, 2006; Firmansyah & Astuti, 2021).

However, most uses of the Klassen Typology still focus on numerical classification without adequate spatial analysis. Yet, regional data is always tied to geographic location and relationships. Spatial analysis and Geographic Information Systems (GIS) provide a more comprehensive understanding of geographic patterns of growth and inequality, including the potential for corridors, clusters, and pockets of underdevelopment (Anselin, 1988; Longley et al., 2011). The integration of the Klassen Typology with spatial analysis allows for a more nuanced understanding of how the core-periphery structure is formed and how certain sectors are concentrated at specific points within the metropolitan area.

Against this backdrop, this study focuses on a spatial analysis of the Klassen Typology in the Banjarkakula Metropolitan Urban Area using two approaches. First, a regional approach classifies the five regencies/cities in the Region based on economic growth and per capita GRDP relative to the provincial average. Second, a sectoral approach assesses the typology of 17 economic sectors in each regencies/cities in the Region. The integration of these two approaches with spatial mapping is expected to provide a clearer picture of the core-periphery structure, sectoral inequality, and policy implications for more integrated and inclusive metropolitan development.

## RESEARCH METHODS

This research uses a quantitative descriptive approach. This approach utilizes numerical data to measure and compare economic performance between regions and

uncover patterns of disparity. This is relevant for mapping regional inequality through regional and sectoral approaches.

The research location is the Banjarkakula Metropolitan Urban Area, comprising Banjarmasin City, Banjarbaru City, Banjar Regency, Barito Kuala Regency, and Tanah Laut Regency. This area is designated as a Metropolitan Area and a National Strategic Area, allowing for a better understanding of the dynamics of the relationship between core cities, buffer cities, and hinterland within a single spatial system (Law Number 26 of 2007; Presidential Regulation Number 85 of 2024).

The study uses secondary data. These data include Gross Regional Domestic Product at Constant Prices (GRDP ADHK) by industry for 17 economic sectors and the population of each district/city in the Banjarkakula Metropolitan Urban Area, as well as data from GRDP ADHK and the population of South Kalimantan Province for comparison. Data were collected for the period 2020 to 2024. The data were obtained from the Central Statistics Agency of South Kalimantan Province and the relevant district/city Statistics Office (BPS). Information regarding administrative boundaries, area, and regional shapefiles were obtained from the Public Works and Spatial Planning Office of South Kalimantan Province.

Data analysis was conducted to address the research objectives, which focused on the Klassen Typology. First, the GRDP growth rate and per capita GRDP for each district/city were calculated, along with the provincial average. These values were used to construct the Klassen Typology using a regional approach. Regions with growth and per capita GRDP above the provincial average were categorized as developed and fast-growing. Other combinations were categorized as fast-growing, developed but depressed, or lagging behind (Sukirno, 2006; Firmansyah & Astuti, 2021).

Second, the Klassen Typology used a sectoral approach. The growth rate and per capita GRDP for each sector within each district/city were calculated relative to the sector average at the provincial level. This method allows for the identification of advanced and rapidly growing sectors, developing sectors, sectors under pressure, and lagging sectors in each region. This sectoral approach allows for a more detailed understanding of the transformation of the internal economic structure. The following is the formulation and classification of the Klassen Typology (Table 1).

- Economic Growth Rate

$$g = \frac{(PDRB_{hk,t} - PDRB_{hk,t-1})}{PDRB_{hk,t-1}} \times 100\% \quad (\text{Sukirno, 2007; BPS, 2008})$$

Information:

$g$  = economic sector growth rate

$PDRB_{hk}$  = PDRB constant price in year t

$PDRB_{hk,t-1}$  = PDRB constant price in the previous year

- Economic Contribution

$$s = \frac{x}{y} \times 100\% \quad (\text{Sukirno, 2007; BPS, 2008})$$

Information:

s = contribution of economic sectors

x = PDRB sector i

y = total PDRB

Table 1. Classification of Classification Typology of Regional/Sectoral Approach

Sector Contribution	Growth Rate	
	$g_i \geq g$	$g_i < g$
$g_{ki} \geq g_k$	Developed and rapidly growing regions/sectors	Regions/Sectors are developed but under pressure
$g_{ki} < g_k$	Areas/Sectors that can still develop rapidly	Relatively underdeveloped regions/sectors

Source: Sjafrizal (1997) and Widodo (2006)

According to Kuncoro (2004), regional/sectoral typology is divided into four quadrants, consisting of:

- 1) Quadrant 1: Developed and fast-growing regions/sectors, which have economic growth rates with per capita incomes higher than the regional average.
- 2) Quadrant 2: Developed but depressed regions/sectors, which have higher per capita incomes but lower than the average economic growth rate.
- 3) Quadrant 3: Regions/sectors with the potential for rapid development, which have high economic growth rates but lower than the average per capita income.
- 4) Quadrant 4: Relatively underdeveloped regions/sectors, which have low economic growth rates and lower per capita incomes.

Third, the results of the regional and sector classifications are visualized spatially with the support of a Geographic Information System. Shapefiles of the administrative boundaries of the Banjarkakula Metropolitan Urban Area districts/cities are used as the basis for the mapping. The Klassen Typology categories are translated into specific symbols and colors so that core-periphery patterns and sectoral distributions can be seen visually.

## RESULTS AND DISCUSSION

### Results

#### A. Classification Typology Based on a Regional Approach

The results of the Classification Typology analysis in the Banjarkakula Metropolitan Urban Area for 2020-2024 are presented in Table 2 below.

Table 2. Results of the Classification Typology Analysis of the Regional Approach in the Banjarmasin Metropolitan Urban Area in 2020-2024

		Klassen Typology Quadrant with Regional Approach	
		Developed and Fast-Growing Regions (Quadrant I)	Developed but Under Pressure (Quadrant II)
Economic Growth Rate	PDRB Per Capita	Banjarmasin City	-
	Regions Can Still Develop Rapidly (Quadrant III)	Relatively Underdeveloped Regions (Quadrant IV)	
	Banjarbaru City	Banjar Regency, Barito Kuala Regency and Tanah Laut Regency	

Source: Secondary Data Processing (2025)

Based on the results of the Klassen Typology analysis using the regional approach in the Banjarmasin Metropolitan Urban Area for 2020-2024:

1. **Banjarmasin City** is categorized as a developed and fast-growing region, as it has higher economic growth and per capita income than the average for South Kalimantan Province. This condition indicates that Banjarmasin City not only has strong and productive basic sectors but is also capable of developing non-basic sectors to support new growth.
2. **Banjarbaru City** is categorized as a region with the potential for rapid development, as it has high economic growth but still has a per capita income below the average for South Kalimantan Province. This condition indicates that Banjarbaru has significant potential for faster growth through strengthening productive sectors and new investment.
3. **Banjar, Barito Kuala, and Tanah Laut Regencies** are categorized as relatively underdeveloped regions, as their economic growth and per capita income are still lower than the average for South Kalimantan Province. This condition reflects that the economic structure of these three regencies is still dominated by traditional sectors with low productivity and high dependence on natural resources. Limited investment, low economic diversification, and suboptimal infrastructure and human resource quality have also slowed down the rate of regional growth.

#### B. Klassen Typology Based on a Sectoral Approach

##### 1. Banjarmasin City

The results of the Klassen Typology analysis using a sectoral approach in Banjarmasin City are presented in Table 3 below.

Table 3. Results of the Classification Typology Analysis Using the Sectoral Approach in Banjarmasin City 2020-2024

Economic Growth Rate Contributions Sector	Klassen Typology Quadrants with a Sectoral Approach Banjarmasin City	
	Advanced and Fast-Growing Sectors (Quadrant I)	Developing but Depressed Sectors (Quadrant III)
<b>10 Sectors</b> Processing Industry; Electricity and Gas Supply; Water Supply; Waste Management, Waste and Recycling; Transportation and Warehousing; Accommodation and Food and Beverage Provision; Information and Communication; Financial and Insurance Services; Corporate Services; Educational Services; and Other Services	<b>4 Sectors</b> Construction; Wholesale and Retail Trade; Automobile and Motorcycle Repair; Real Estate; and Healthcare and Social Activities	
<b>Potential and Fast-Growing Sectors (Quadrant II)</b> Agriculture, Forestry, and Fisheries	<b>Relatively Underdeveloped Sectors (Quadrant IV)</b> Mining and Quarrying; and Government Administration, Defense, and Mandatory Social Security	
<b>1 Sector</b> Agriculture, Forestry, and Fisheries	<b>2 Sectors</b> Mining and Quarrying; and Government Administration, Defense, and Mandatory Social Security	

Source: Secondary Data Processing (2025)

### 1. Banjarbaru City

The results of the Klassen Typology analysis using the sectoral approach in Banjarbaru City are presented in Table 4 below.

Table 4. Results of the Classification Typology Analysis Using the Sectoral Approach in Banjarbaru City 2020-2024

Economic Growth Rate Contributions Sector	Klassen Typology Quadrants with a Sectoral Approach Banjarbaru City	
	Advanced and Fast-Growing Sectors (Quadrant I)	Developing but Depressed Sectors (Quadrant III)
<b>11 Sectors</b> Electricity and Gas Supply; Water Supply; Waste Management, Waste and Recycling; Construction, Transportation and Warehousing; Provision of	<b>1 Sektor</b> Wholesale and Retail Trade, Car and Motorcycle Repair	

		Klassen Typology Quadrants with a Sectoral Approach Banjarbaru City	
		Economic Growth Rate	Contributions Sector
		Accommodation and Food and Beverages; Information and Communication; Real Estate; Government Administration, Defense, and Compulsory Social Security; Educational Services; Health Services and Social Activities; and Other Services	
		<b>Potential and Fast-Growing Sectors (Quadrant II)</b>	<b>Relatively Underdeveloped Sectors (Quadrant IV)</b>
		<b>2 Sectors</b> Manufacturing Industry and Corporate Services	<b>3 Sectors</b> Agriculture, Forestry, and Fisheries; Mining and Quarrying; and Financial Services and Insurance

Source: Secondary Data Processing (2025)

## 2. Banjar Regency

The results of the Klassen Typology analysis using the sectoral approach in Banjar Regency are presented in Table 5 below.

Table 5. Results of the Classification Typology Analysis Using the Sectoral Approach in Banjar Regency 2020-2024

		Klassen Typology Quadrants with a Sectoral Approach Banjar Regency	
		Economic Growth Rate	Contributions Sector
		<b>Advanced and Fast-Growing Sectors (Quadrant I)</b>	<b>Developing but Depressed Sectors (Quadrant III)</b>
		<b>4 Sectors</b> Electricity and Gas Supply; Accommodation and Food and Beverage Provision; Information and Communication; and Educational Services	<b>7 Sectors</b> Agriculture, Forestry, and Fisheries; Construction; Wholesale and Retail Trade; Automobile and Motorcycle Repair; Real Estate; Government Administration, Defense, and Compulsory Social Security; Health Services and Social Activities; and Other Services
		<b>Potential and Fast-Growing Sectors (Quadrant II)</b>	<b>Relatively Underdeveloped Sectors (Quadrant IV)</b>
		<b>4 Sectors</b>	<b>2 Sectors</b>

Economic Growth Rate Contributions Sector	Klassen Typology Quadrants with a Sectoral Approach Banjar Regency	
	Pertambangan dan Penggalian; Industri Pengolahan; Pengadaan Air, Pengelolaan Sampah, Limbah dan Daur Ulang; serta Jasa Perusahaan	Transportation and Warehousing; and Financial Services and Insurance

Source: Secondary Data Processing (2025)

### 3. Barito Kuala Regency

The results of the Klassen Typology analysis using the sectoral approach in Barito Kuala Regency are presented in Table 6 below.

Table 6. Results of the Classification Typology Analysis Using the Sectoral Approach in Barito Kuala Regency 2020-2024

Economic Growth Rate Contributions Sector	Klassen Typology Quadrants with a Sectoral Approach Barito Kuala Regency	
	Advanced and Fast-Growing Sectors (Quadrant I)	Developing but Under Pressure Sectors (Quadrant III)
	<p><b>5 Sectors</b> Construction; Accommodation and Food and Beverage Services; Information and Communication; Real Estate; and Educational Services</p>	<p><b>4 Sectors</b> Agriculture, Forestry, and Fisheries; Manufacturing; Wholesale and Retail Trade; Automobile and Motorcycle Repair; and Government Administration, Defense, and Mandatory Social Security</p>
	<p><b>Potential and Fast-Growing Sectors (Quadrant II)</b></p> <p><b>2 Sectors</b> Water Supply, Waste Management, Waste and Recycling; and Corporate Services</p>	<p><b>Relatively Underdeveloped Sectors (Quadrant IV)</b></p> <p><b>6 Sectors</b> Mining and Quarrying; Electricity and Gas Supply; Transportation and Warehousing; Financial Services and Insurance; Healthcare and Social Activities; and Other Services</p>

Source: Secondary Data Processing (2025)

### 4. Tanah Laut Regency

The results of the Klassen Typology analysis using the sectoral approach in Tanah Laut Regency are presented in Table 7 below.

Table 7. Results of the Classification Typology Analysis Using the Sectoral Approach in Tanah Laut Regency 2020-2024

		Klassen Typology Quadrants with a Sectoral Approach Tanah Laut Regency	
		Advanced and Fast-Growing Sectors (Quadrant I)	Developing but Depressed Sectors (Quadrant III)
Contributions Sector	Economic Growth Rate	2 Sectors Agriculture, Forestry, and Fisheries; and Mining and Quarrying	1 Sector Wholesale and Retail Trade, Automobile and Motorcycle Repair
	Potential and Fast-Growing Sectors (Quadrant II)	7 Sectors Processing Industry; Electricity and Gas Supply; Construction; Corporate Services; Government Administration, Defense, and Mandatory Social Security; Educational Services; and Other Services	7 Sectors Water Supply, Waste Management, Waste and Recycling; Transportation and Warehousing; Accommodation and Food and Beverage Services; Information and Communication; Financial Services and Insurance; Real Estate; and Health Services and Social Activities

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Source: Secondary Data Processing (2025)

### C. Maps

## 1. Classification Typology Map with Regional Approach

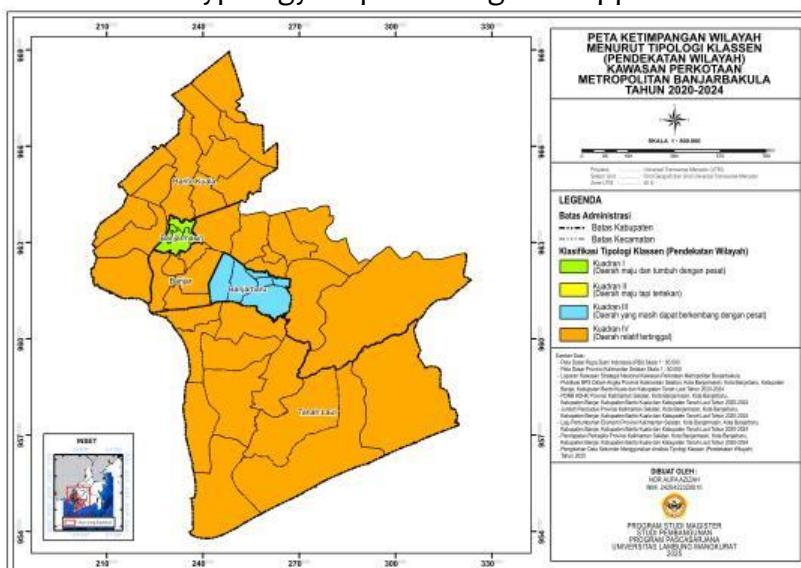


Figure 1. Regional Inequality Map According to the Klassen Typology (Regional Approach)  
Banjarbarkula Metropolitan Urban Area 2020-2024

## 2. Classification Typology Map Sectoral Approach

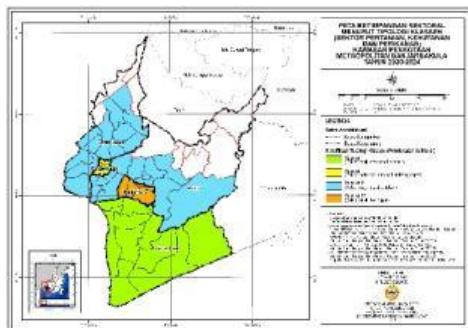


Figure 2. Map of Regional Inequality According to the Classification Typology (Agriculture, Forestry and Fisheries Sector) in the Banjarkakula Metropolitan Urban Area 2020-2024

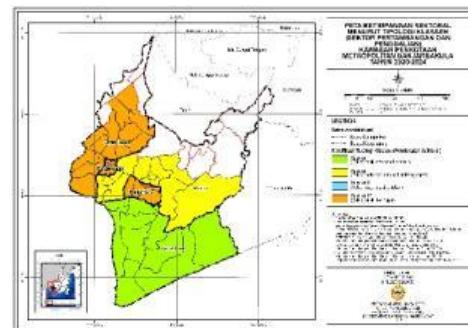


Figure 3. Map of Regional Inequality According to Class Typology (Mining and Excavation Sector) in the Banjarkakula Metropolitan Urban Area 2020-2024

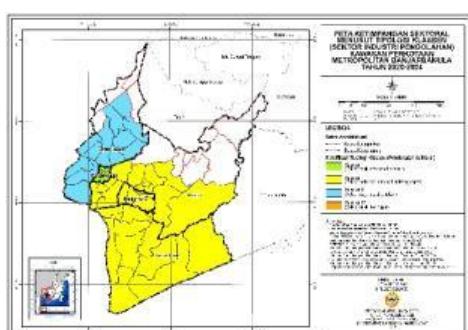


Figure 4. Regional Inequality Map According to Classification Typology (Processing Industry Sector) in the Banjarkakula Metropolitan Urban Area 2020-2024

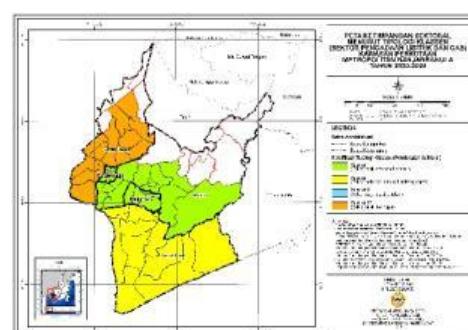


Figure 5. Map of Regional Inequality According to the Classification Typology (Electricity and Gas Supply Sector) in the Banjarkakula Metropolitan Urban Area 2020-2024

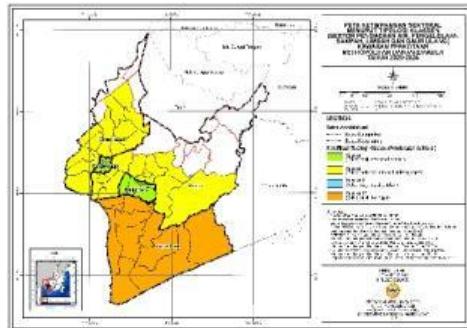


Figure 6. Regional Inequality Map According to the Klassen Typology (Water Supply, Waste Management, Waste and Recycling Sectors) in the Banjarkakula Metropolitan Urban Area 2020-2024

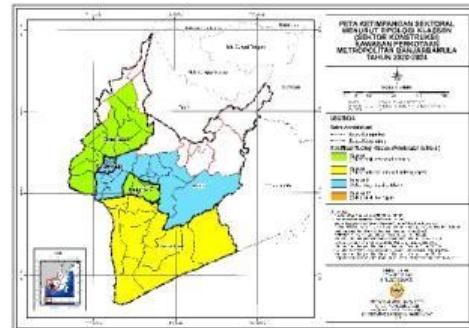


Figure 7. Map of Regional Inequality According to Classification Typology (Construction Sector) of the Banjarkakula Metropolitan Urban Area 2020-2024

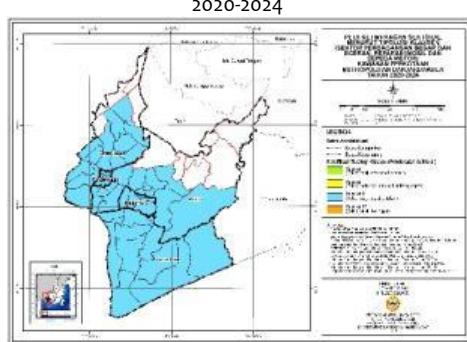


Figure 8. Regional Inequality Map According to Klassen Typology (Wholesale and Retail Trade, Car and Motorcycle Repair) in the Banjarkakula Metropolitan Urban Area 2020-2024

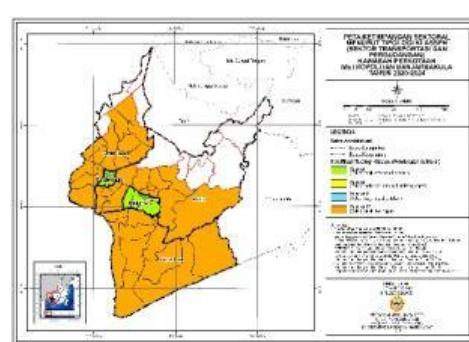


Figure 9. Map of Regional Inequality According to Classification Typology (Transportation and Warehousing Sector) in the Banjarkakula Metropolitan Urban Area 2020-2024

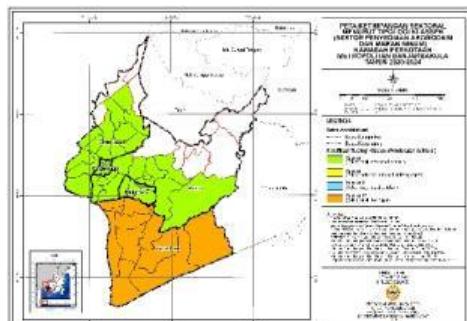


Figure 10. Map of Regional Inequality According to Classification Typology (Accommodation and Food and Beverage Provision Sector) in the Banjarkakula Metropolitan Urban Area 2020-2024

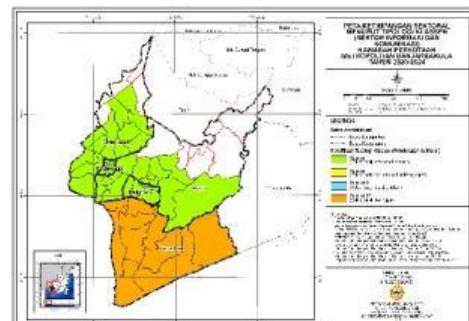


Figure 11. Map of Regional Inequality According to Classification Typology (Information and Communication Sector) of the Banjarkakula Metropolitan Urban Area 2020-2024

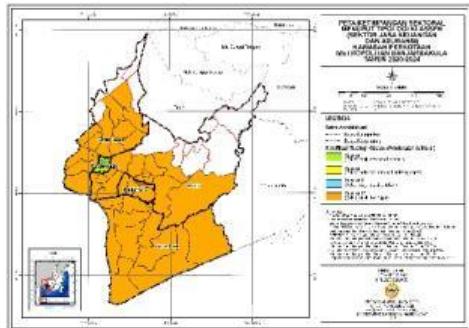


Figure 12. Map of Regional Inequality According to Klassen Typology (Financial Services and Insurance Sector) in the Banjarkakula Metropolitan Urban Area 2020-2024

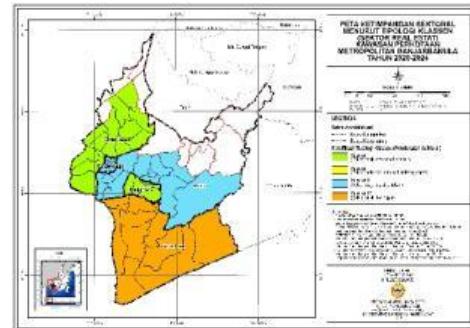


Figure 13. Map of Regional Inequality According to Classification Typology (Real Estate Sector) in the Banjarkakula Metropolitan Urban Area 2020-2024

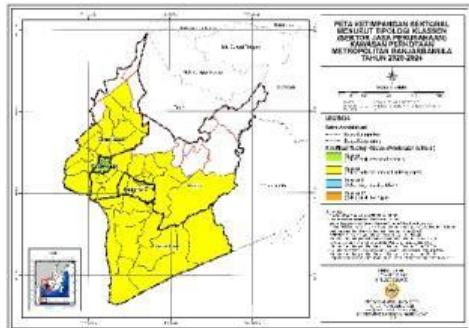


Figure 14. Regional Inequality Map According to Classification Typology (Corporate Services Sector) in the Banjarkakula Metropolitan Urban Area 2020-2024

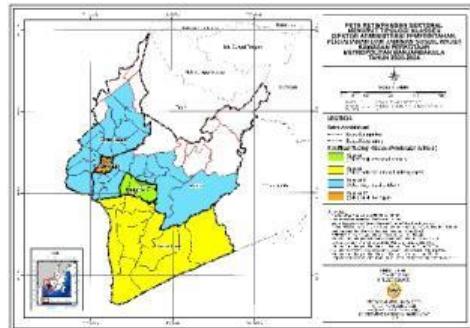


Figure 15. Map of Regional Inequality According to Classification Typology (Government Administration, Defense, and Mandatory Social Security Sectors) in the Banjarkakula Metropolitan Urban Area 2020-2024

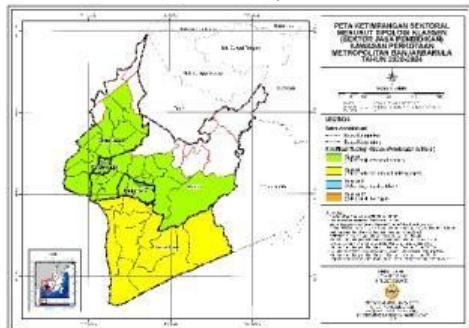


Figure 16. Regional Inequality Map According to Classification Typology (Education Services Sector) in the Banjarkakula Metropolitan Urban Area 2020-2024

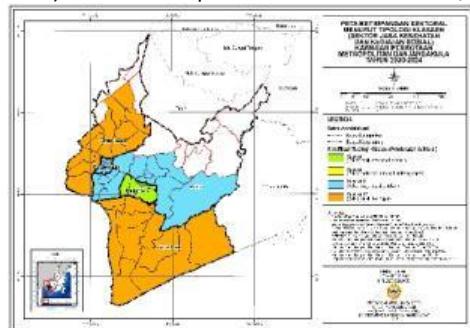


Figure 17. Map of Regional Inequality According to Classification Typology (Health Services and Social Activities Sector) in the Banjarkakula Metropolitan Urban Area 2020-2024

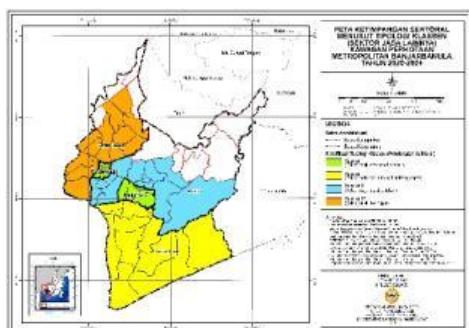


Figure 18. Regional Inequality Map According to Classification Typology (Other Service Sectors) in the Banjarkakula Metropolitan Urban Area 2020-2024

## Discussion

### A. Class Typology Based on the Regional Approach

The results of the Klassen Typology indicate that the economic structure of the Banjarkakula region remains uneven. Economic growth remains concentrated in Banjarmasin City, the core city, while surrounding areas have developed more slowly. Banjarmasin serves as a hub for trade, services, and other major economic activities, contributing significantly to the region's GRDP. Banjarbaru City shows positive growth potential, primarily due to its role as a center of government and education. High growth in Banjarbaru signals a shift in economic activity from Banjarmasin to the buffer zone, in

line with the development of the Banjarkakula metropolitan area. Meanwhile, Banjar, Barito Kuala, and Tanah Laut Regencies remain at a stage of slow growth and structural underdevelopment, as their economies remain reliant on the primary sector (agriculture, fisheries, and forestry), which tends to have low productivity. Furthermore, limited infrastructure, investment, and human resource quality are factors hindering income growth and competitiveness. The Klassen typology illustrates that development in the Banjarkakula region is centralized and unbalanced, with Banjarmasin as the main growth center, Banjarbaru as a rapidly growing potential area, while other regencies still require strategies to strengthen the regional economy and ensure equitable development for optimal metropolitan integration. Consistent with research by Purwanti and Setyari (2021), whose research focused on the Sarbagita Urban Area in Bali Province, the Klassen typology results show that Denpasar City is the core city of the region, located in the Developed and Fast-Growing Region, as is Badung Regency. Gianyar Regency is in the Rapidly Developing Region, while Tabanan Regency is in the Relatively Underdeveloped Region.

Overall, the Klassen typology results indicate that economic development in the Banjarkakula region remains uneven, with Banjarmasin as the developed and fast-growing region, Banjarbaru as the developing potential region, and Banjar, Barito Kuala, and Tanah Laut as the relatively underdeveloped regions. These findings align with Kuncoro (2004), who stated that regional economic growth tends to be concentrated in areas with structural advantages and high economic agglomeration. Therefore, Banjarkakula's future development strategy needs to be directed at strengthening interregional connectivity, equitable infrastructure distribution, and developing leading sectors in underdeveloped areas, so that the growth diffusion process (spread effect) can run optimally and interregional inequality can be gradually reduced.

The implications of the research findings indicate that Banjarmasin City, as a developed center, must strengthen its role as a growth driver through investment in innovation, technology, and high-level services that will create a multiplier effect for the surrounding region. Banjarbaru City, which is categorized as developing, requires an acceleration strategy through connectivity with Banjarmasin, including transportation infrastructure, market integration, and technology transfer to accelerate the transition to developed status. Meanwhile, the three underdeveloped regencies (Banjar, Barito Kuala, and Tanah Laut) require specific interventions in the form of basic infrastructure investment, agro-industrial development aligned with local potential, and a comprehensive MSME empowerment program to stimulate endogenous growth. Without a measurable integration strategy, the risk of economic divergence and spatial inequality will continue to grow, threatening the sustainability of regional growth as a whole.

## B. Klassen Typology Based on a Sectoral Approach

The theory supporting this analysis stems from the Klassen Typology, which is used to measure the level of progress of a sector or region based on economic growth and contribution to GRDP. This typology was introduced by Boudeville in regional economic theory, emphasizing that regional development must be viewed through the main driving sectors that act as leading sectors. According to Arsyad (2010) in Regional Development Economics, leading sectors are characterized by large contributions and high growth because they can create a multiplier effect on other sectors. The Banjarmasin mapping results align with this theory, as the service and trade sectors play a dominant role in driving the city's economy.

Based on the sectoral Klassen Typology, the pattern of economic growth is concentrated in the core area of the Banjarkakula Metropolitan Urban Area. Geographically, accelerated economic growth occurs along the central corridor, which includes Banjarmasin City, Banjarbaru City, and parts of Banjar Regency, where the majority of sectors have reached the "advanced and fast-growing" or "potential and fast-developing" categories. This concentration is particularly evident in the service, trade, transportation, education, health, and government administration sectors, which are economically more dynamic and profitable than the primary sector. Conversely, the northern region of Barito Kuala Regency and the southern region of Tanah Laut Regency are categorized as "still developing" and "relatively lagging" in many sectors, indicating that the benefits of economic growth have not been evenly distributed across the region. This pattern aligns with the core-periphery theory in regional economics, which states that urban agglomeration economic growth tends to create spatial disparities due to disparities in infrastructure and access to information between core and peripheral areas.

The implications of the research findings indicate the need to develop distinct economic sectors according to the local advantages of each region. The southern region (Tanah Laut and Barito Kuala Regencies), which still rely on agriculture and fisheries, should be developed as an agro-industrial sector supported by modern processing facilities and market access to increase the selling value of agricultural products from raw commodities to semi-finished or finished products. Meanwhile, the central corridor (Banjarmasin-Banjarbaru) should be strengthened as a service and logistics sector serving the distribution of agro-industrial products and other commodities to regional and national markets. With this integrated sector strategy, the Banjarkakula Metropolitan Area can transform from a simple metropolitan structure to a mutually reinforcing polycentric structure, where each region plays a strategic role, the economy flows in both directions, and growth is more evenly distributed. The long-term implications are that development becomes more sustainable by involving all regions within the region, reducing income disparities between regions, and increasing the region's overall competitiveness at the national and regional levels.

### C. Maps

Mapping regional inequality using the Klassen Typology is an effective analytical approach for identifying variations in development levels between regions based on sectoral performance. This method groups regions into four quadrants: advanced and fast-growing, advanced but depressed, rapidly developing, and lagging, based on two main variables: economic growth and sector contribution to GRDP. Thus, this analysis not only provides an overview of a region's relative position within the context of economic development but also reveals the underlying sectoral dynamics.

The results of the Klassen Typology mapping show the leading sectors that drive the economy in developed regions, as well as potential growth sectors in developing regions. For example, metropolitan areas typically have a large contribution from tertiary sectors such as services and trade, while outlying regions tend to rely on primary sectors such as agriculture or fisheries. Through this grouping, it is possible to identify which sectors have competitive advantages and which regions have the potential to experience accelerated development if supported by appropriate policies. This spatial analysis thus serves as a basis for formulating a more equitable and targeted economic development strategy.

Regional classification using the Klassen Typology can serve as a reference for regional development planning oriented towards reducing inequality. Underdeveloped regions, for example, require policy interventions focused on increasing the capacity of potential sectors and equitable distribution of economic infrastructure. Conversely, developed regions can be directed to act as growth centers that distribute economic benefits to surrounding areas. Therefore, mapping inequality using the Klassen Typology approach plays a strategic role in creating synergy between regions and encouraging the growth of a more balanced, adaptive, and competitive regional economic system.

## CONCLUSION

The economic development structure of the Banjarmasin Metropolitan Area remains unequal, with strong growth concentrated in Banjarmasin City, a developed and fast-growing region, while Banjarbaru City is categorized as still capable of rapid development, and the other three regencies (Banjar, Barito Kuala, and Tanah Laut) are relatively lagging behind in terms of both growth and per capita income. This situation confirms that the agglomeration process and concentration of economic activity in the core corridor have not been fully accompanied by the diffusion of benefits to the buffer areas, thus maintaining a center-periphery pattern in regional dynamics.

The sectoral Klassen Typology approach shows that the services, trade, transportation, education, health, and government administration sectors are concentrated in the central Banjarmasin-Banjarbaru corridor and parts of Banjar Regency, while the northern Barito Kuala and southern Tanah Laut regions are still

dominated by the primary sector with relatively low productivity. This indicates that the structural transformation of the regional economy is not taking place synchronously across regions, with the tertiary and modern services sectors growing rapidly in the core region, while the primary sector in the peripheral regions has not received adequate support to advance to value-added agro-industry. Spatial mapping confirms the concentration of the "developed and fast-growing" quadrants in the regional center and the distribution of the "still developing" and "relatively underdeveloped" quadrants in the outer regions, thus clarifying the geographic core-periphery configuration.

The main implication is the need for a more integrated, spatially sectoral, and inequality-reducing metropolitan development strategy. Banjarmasin City needs to be strengthened as a growth engine based on innovation, high-value services, and regional logistics, while Banjarbaru needs to be promoted as a hub for government, education, and modern services, strongly connected to the economic center through improved physical connectivity and markets. Meanwhile, Banjar, Barito Kuala, and Tanah Laut Regencies require affirmative action in the form of basic infrastructure development, agro-industrial development based on local strengths, human resource enhancement, and strengthening of MSMEs and distribution networks to enable them to capitalize on economic linkages with the core region. The integration of regional and sectoral policies based on the Klassen Typology results and spatial analysis is expected to drive Banjarkakula's transformation toward a more polycentric, inclusive, and sustainable metropolitan structure, with a more equitable flow of development benefits across regions.

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